

WHAT IS CLAIMED IS:

1. A printer maintenance apparatus for maintaining a printer having a print head, wherein the print head includes a nozzle surface in which a plurality of nozzles are formed, for ejecting ink droplets onto fed printing medium for printing, the apparatus comprising:

a mounting base that is movable forward and backward between a maintenance position and a retraction position, the maintenance position in which the mounting base is opposed to the nozzle surface and the retraction position in which the mounting base is retracted from the print head;

a wiping mechanism being mounted on the mounting base and including a wiper base supported on the mounting base movably toward the nozzle surface and a wiper attached to the wiper base; and

a capping mechanism being mounted on the mounting base and including a cap base supported on the mounting base movably toward the nozzle surface and a cap attached to the cap base;

wherein the cap base moves toward the nozzle surface to move the cap to cover the nozzle surface when the mounting base is at the maintenance position;

the cap base moves retractably from the nozzle surface when the mounting base moves from the maintenance position toward the retraction position;

the wiper base moves toward the nozzle surface to bring

the wiper into contact with the nozzle surface when the mounting base is at the maintenance position; and

the wiper base keeps the wiper in contact with the nozzle surface while the mounting base moves backward from the maintenance position toward the retraction position.

2. The printer maintenance apparatus according to claim 1, wherein the cap base has an engagement portion which abuts against a fixed portion disposed in the printer, at a forward end of the maintenance position due to a forward motion of the mounting base to the maintenance position, to thereby move the cap base toward the nozzle surface and cover the nozzle surface with the cap.

3. The printer maintenance apparatus according to claim 1, wherein the wiper base abuts against a fixed portion which abuts against a fixed portion disposed in the printer, at the maintenance portion due to a forward motion of the mounting base to the maintenance position, to thereby move the wiper toward the nozzle surface and bring the wiper into contact with the nozzle surface.

4. The printer maintenance apparatus according to claim 1, wherein the capping mechanism includes a plurality of link members each supported swingably at one end on the mounting

base and supported swingably at the other end on the cap base.

5. The printer maintenance apparatus according to claim 1,
wherein the capping mechanism includes a cam groove

5 inclined to the nozzle surface and a pin slidable in the cam
groove, and one of the cam groove and the pin is provided in
the mounting base while the other is provided in the cap base.

6. The printer maintenance apparatus according to claim 1,

10 wherein the capping mechanism allows the cap to leave
the nozzle surface due to self-weight of the cap base in backward
motion of the mounting base from the maintenance position to
the retraction position.

15 7. The printer maintenance apparatus according to claim 1,
wherein the capping mechanism includes an urging member
that urges the cap to leave the nozzle surface.

8. The printer maintenance apparatus according to claim 1,

20 wherein the wiping mechanism supports the wiper base
swingably on the mounting base; and

the wiping mechanism includes an urging member that swings
the wiper base to bring the wiper into contact with the nozzle
surface.

25

9. The printer maintenance apparatus according to claim 8,
wherein the wiping mechanism includes a lever supported
swingably on the mounting base;

the lever is swingable between a separation position and
5 a wiping position, the separation position where the lever abuts
against the wiper base to thereby swing the wiper base against
urging of the urging member and make the wiper leave the nozzle
surface, the wiping position where the lever brings the wiper
into contact with the nozzle surface; and

10 the lever is swung to the wiping position at a forward
end due to a forward motion of the mounting base to the maintenance
position.

10. The printer maintenance apparatus according to claim 9,
15 wherein the wiping mechanism swings the lever to the separation
position at a backward end due to a backward motion of the mounting
base.

11. The printer maintenance apparatus according to claim 1,
20 wherein the wiping mechanism supports the wiper base
shiftablely on the mounting base;

the wiping mechanism includes an urging member that urges
the wiper base to leave the nozzle surface;

the wiping mechanism brings the wiper into contact with
25 the nozzle surface due to a forward motion of the mounting base

to the maintenance position; and

the wiping mechanism shifts the wiper base by means of the urging member so as to make the wiper leave the nozzle surface.

5 12. A printer comprising:

a print head including a nozzle surface that ejects ink droplets onto fed printing medium;

a mounting base that is movable forward and backward between a maintenance position and a retraction position, the
10 maintenance position in which the mounting base is opposed to the nozzle surface and the retraction position in which the mounting base is retracted from the print head;

a wiping mechanism being mounted on the mounting base and including a wiper base supported on the mounting base movably
15 toward the nozzle surface and a wiper attached to the wiper base; and

a capping mechanism being mounted on the mounting base and including a cap base supported on the mounting base movably toward the nozzle surface and a cap attached to the cap base;

20 wherein the cap base moves toward the nozzle surface to move the cap to cover the nozzle surface when the mounting base is at the maintenance position;

the cap base moves retractably from the nozzle surface when the mounting base moves from the maintenance position toward
25 the retraction position;

the wiper base moves toward the nozzle surface to bring the wiper into contact with the nozzle surface when the mounting base is at the maintenance position; and

the wiper base keeps the wiper in contact with the nozzle surface while the mounting base moves backward from the maintenance position toward the retraction position.

13. The printer according to claim 12, further comprising:
a fixed portion;

wherein the cap base has an engagement portion which abuts against the fixed portion at a forward end of the maintenance position due to a forward motion of the mounting base to the maintenance position, to thereby move the cap base toward the nozzle surface and cover the nozzle surface with the cap.

14. The printer according to claim 13,
wherein the fixed portion is a lock portion that is disposed at the print head.